

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claim 1 (Previously presented): A method for adjusting a probe card, comprising:

placing a probe card in a prober;

measuring a first distance from a known position to a position of said probe card;

comparing via microprocessor means said first distance to a second distance to determine a variance therebetween; and,

when said microprocessor determines said variance exceeds a determined value, electrically signally means for transmitting energy to said probe card to selectively deflect said probe card to control the geometric planarity of said probe card.

Claim 2 (Original): The method of claim 1 wherein said comparing and signaling are done repetitively until said variance does not exceed said determined value.

Claim 3 (Original): The method of claim 2 wherein said measuring is with an optical sensor.

Claim 4 (Original): The method of claim 3 wherein said microprocessor is in a test head on said prober.

Claim 5 (Original): The method of claim 3 wherein said microprocessor is in a tester that is physically separate from said prober and is connected thereto by means for data communication.

Claim 6 (Original): The method of claim 3 wherein said means for transmitting energy transmits thermal energy to said probe card.

Claim 7 (Original): The method of claim 3, wherein said probe card comprises a bi-metallic element connected thereto to impart deflection.

Claim 8 (Original): The method of claim 1 wherein said measuring is with an optical sensor.

Claim 9 (Original): The method of claim 1 wherein said microprocessor is in a test head on said prober.

Claim 10 (Original): The method of claim 1 wherein said microprocessor is in a tester that is physically separate from said prober and is connected thereto by means for data communication.

Claim 11 (Original): The method of claim 1 wherein said means for transmitting energy transmits thermal energy to said probe card.

Claim 12 (Original): The method of claim 1, wherein said probe card comprises a bi-metallic element connected thereto to impart deflection.

Claim 13 (Original): A system for adjusting geometric planarity of a probe card, comprising:

a prober for receiving a probe card;

means for measuring a distance indicating a position of said probe card;

computer means for comparing said first distance to a second distance to determine a variance therebetween; and

means for electrically signaling in response to said variance exceeding a value, said means for signally transmitting a signal to activate means for transmitting energy to said probe card to selectively deflect said probe card to control the geometric planarity of said probe card.

Claim 14 (Previously presented): The system of claim 13, wherein said means for transmitting energy comprises an energy transmissive element which is a thermal element employing thermal energy to selectively deflect a portion of said probe card.

Claim 15 (Original): The system of claim 13 and further including a temperature sensor for monitoring temperature corresponding to deflection of said probe card.

Claim 16 (Withdrawn): The system of claim 13 and further including a stiffening element attached to a face of said probe card and adapted to provide structural resistance to planarity deflection of said probe card.

Claim 17 (Withdrawn): The system of claim 13 and further comprising means for facilitating radial expansion/contraction of said probe card with respect to a stiffening element.

Claim 18 (Withdrawn): The system of claim 13 and further including a multi-layer element having a first layer and a second layer, said first layer and said second layer having different rates of expansion per unit of energy, said multi-layer element being attached to said probe card, wherein exposing said multi-layer element to energy causes said multi-layer element to selectively impart deflective forces to a portion of said probe card.

Claim 19 (Currently amended): A method of using a probe card, said method comprising:
bringing a probe card to within an initial distance of an electronic device to be tested;
monitoring an actual distance of said probe card from said electronic device; and
adjusting said actual distance if said actual distance becomes smaller or greater than a predetermined range of allowable distances,

wherein said method further comprises testing said electronic device, and said monitoring step and said adjusting step are performed at least in part during said testing step.

Claim 20 (Canceled)

Claim 21 (Currently amended): The method of ~~claim 20~~ claim 19, wherein:
said probe card is part of an apparatus having a plurality of probes, and
said bringing step comprises bringing ones of said probes into contact with said electronic device to be tested.

Claim 22 (Previously presented): The method of claim 21, wherein said monitoring step comprises monitoring a pressure of said probes against said electronic device.

Claim 23 (Previously presented): The method of claim 21, wherein:

said bringing step comprises moving said electronic device into contact with said ones of said probes, and

said adjusting step comprises moving said electronic device.

Claim 24 (Previously presented): The method of claim 19, wherein:

said bringing step comprises moving said electronic device, and

said adjusting step comprises moving said electronic device.

Claim 25 (Currently amended): ~~The method of claim 19,~~ A method of using a probe card, said method comprising:

bringing a probe card to within an initial distance of an electronic device to be tested;

monitoring an actual distance of said probe card from said electronic device; and

adjusting said actual distance if said actual distance becomes smaller or greater than a predetermined range of allowable distances,

wherein said adjusting step comprises controlling an energy transmissive device disposed adjacent said probe card.

Claim 26 (Previously presented): The method of claim 25, wherein said energy transmissive device comprises a thermal element.

Claim 27 (Previously presented): The method of claim 26, wherein said thermal element is capable of heating at least a portion of said probe card.

Claim 28 (Currently amended): ~~The method of claim 19,~~ A method of using a probe card, said method comprising:

bringing a probe card to within an initial distance of an electronic device to be tested;

monitoring an actual distance of said probe card from said electronic device; and

adjusting said actual distance if said actual distance becomes smaller or greater than a predetermined range of allowable distances,

wherein said adjusting step comprises heating a portion of said probe card.

Claim 29 (Currently amended): ~~The method of claim 19,~~ A method of using a probe card, said method comprising:

bringing a probe card to within an initial distance of an electronic device to be tested;
monitoring an actual distance of said probe card from said electronic device; and
adjusting said actual distance if said actual distance becomes smaller or greater than a
predetermined range of allowable distances,

wherein said adjusting step comprises:

 determining whether to heat or cool a portion of said probe card, and
 heating or cooling said portion of said probe card in accordance with said
determining step.